



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 11, 2008

MEMO TO: Jay Bennett, Jonathan Bivens, Stuart Bourne, Dennis Wofford, Judith Corley-Lay, Randy, Garris, Ron Hancock, Berry Jenkins, Don Lee, Michael Manning, Gerhard Pilcher, Dave Rankin, Ed Spencer, Michael Taylor, and Brian Webb

FROM: Victor Barbour, PE
State Project Services Engineer

SUBJECT: AGC/Roadway Subcommittee Meeting Minutes
June 19, 2008

The subject committee met on June 19, 2008 at 9:30 a.m. in the Riverwood Conference Room at the Century Center with the following in attendance:

Jonathan Bivens	Travis Padgett	Dwayne Sykes
Randy Garris	Gerhard Pilcher	Michael Taylor
Ron Hancock	Ted Sherrod	Dennis Wofford
Chris Howard	Norma Smith	Sim Wooten
		Roger Worthington

The following items were discussed:

1. ACCOMMODATIONS OF PEDESTRIANS WITHIN WORK ZONES

Chris Howard announced new instructions for accommodations of pedestrians within work zones. Pedestrians cannot be placed in situations more dangerous than they were in before the work began. This may entail but not be limited to building sidewalks or different construction phasing. For future projects, details for accommodating pedestrians will be incorporated in the traffic control work zone plans. Instructions have gone to all the Divisions. [Handout No. 1](#)

2. SKAGGS METHOD FOR DETERMINING LATERAL EFFECTS OF A BORROW PIT ON ADJACENT WETLANDS

Based upon recommendations from a recently completed research project associated with this topic, Ted Sherrod requested comments on revisions to the Skaggs Methods Procedures. Comments will be reviewed and incorporated into these procedures for discussion at the next meeting. [Handout No. 2](#)

3. BORROW PIT DEWATERING BASIN

Ted received comments on this proposed new pay item for projects with borrow pits that require dewatering. This proposal was also precipitated by recent research on this topic in an attempt to achieve water quality standards for dewatering operations. Comments were received and will be discussed at the next meeting. [Handout No. 3](#)

4. BORROW AND WASTE SITE RECLAMATION PROCEDURES FOR CONTRACTED PROJECTS

Ted discussed several proposed edits to Reclamation Plan procedures with several comments being given. A proposed final version will be discussed at our next meeting. [Handout No. 4](#)

5. STAGING AREA, AN AMENDMENT TO RECLAMATION PLAN PROCEDURES

Ted received comments on this draft proposal for actions required at staging areas that occur outside project limits. Several comments were voiced and will be incorporated into a revised version and discussed at our next meeting. [Handout No. 5](#)

6. PLACEMENT OF ABC STONE ON SANDY MATERIAL

Ron Hancock announced that a meeting will be held in New Bern next week with the DCEs from Divisions 1-3 to talk about how each division applies this and to discuss if we need Specifications changes or internal instructions. If it is determined that Specifications are needed, he will call on Jonathan Bivens and Michael Taylor for input.

7. CONTRACT TIME GUIDELINES

At the April 19, 2008 meeting, Randy Garriss distributed Contract Time Guidelines for review by the industry. Some comments were received and noted. Discussion included Stage 1 erosion control, partial clearing, erosion control not accounted for and utility relocations not accounted for. In addition, the Department will review the production rates based on GPS grading in future reviews of the Contract Time Guidelines. [Handout No. 6](#)

8. UTILITIES PAY ITEMS UPDATE

At the February meeting, a subcontractor discussed issues and problems as they related to the lack of utility pay items in a specific project. After review, the Department does not see the need to change utility pay items based on one situation, but will continue to monitor for problems. If the Department observes an increase in prices for the questioned items, the pay items will be reviewed again.

9. BID ALTERNATES UPDATE

Randy Garriss gave an update of the bid alternates special provision. He stated that a valid zero bid is in conflict with the Specifications Book. He stated that Expedite shows a red folder if more than one bid is entered. The Department has to delete all but one of the unit costs if a bidder submits a unit cost for multiple items of an authorized alternate. Effective with the July 15, 2008 letting, a Project Special Provision was included in all project proposals in order to correct the valid zero bid conflict. [Handout No. 7](#)

10. SHOULDER BERM UPDATE

Randy Garriss stated that the Estimating Engineer reviewed the quantities and prices that the contractors said they are seeing. The Department does not see any benefit to making changes at this time. Therefore, the current detail and pay item will be left as is unless there are substantial increases that can be tied to the design.

11. RAILROAD FLAGGING

Randy Garriss distributed a Special Provision that revises Intermediate Contract Time Number () Incentive Payment and Liquidated Damage (RR Flaggers) for review by the Industry. He stated that this provision was well-received by the AGC Structure Committee. This provision will be used with projects involving bridge construction adjacent to a RR that also include other bridge construction not involving the RR. The intent is to encourage the RR work to be done in a continuous manner and to minimize cost associated with RR flaggers. The Industry had some general comments but no objections. [Handout No. 7](#)

11. OTHER BUSINESS

- (A) The Industry said that lump sum grading jobs include shallow undercut, occasionally. They asked that the Department clarify shallow undercut or make it 226 instead of Lump Sum.
- (B) The Industry requested that the Department review Drop Inlets with rebar in footing into walls. (Ask Joel Howerton)
- (C) Aprons Draft Special Provision at the next meeting.

REMAINING MEETING DATES FOR 2008

August 21 October 23 December 18

Note: All meetings will begin at 9:30 a.m. You may want to reserve all day for the meeting in case it runs long, or there is a need to make a field trip in the afternoon.

C: Ellis Powell, PE
 Marsha Sample
 Stuart Borne, PE



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

May 20, 2008

LYNDIE TIPPITT
SECRETARY

MEMORANDUM TO: Steve Varmedoc, PE
Chief Engineer-Operations

Debbie Barbour, PE
Director of Preconstruction

FROM: *William F. Rosser*
William F. Rosser, PE
State Highway Administrator

SUBJECT: Accommodations of Pedestrians within Work Zones

The maintenance of pedestrian traffic has become an issue on several projects that were either under construction or late in the design phase of project development. In response, I requested Stuart Bourne, State Work Zone Traffic Engineer, to establish a committee from different units and branches within the Department and Federal Highway Administration to address this issue. The committee's goal was to review all current procedures and check the compliance of these procedures with the requirement of the Manual on Uniform Traffic Control Devices (MUTCD).

Subsequently, the committee has been meeting to address the "needs and control" of pedestrians, including persons with disabilities, during construction in accordance with the requirements of Chapter 6 of the MUTCD. The committee determined that NCDOT already has the necessary policies to comply. However, existing procedures will need to be revised to ensure that pedestrian needs are dealt with early in the project development process.

The committee has provided a list of recommended changes to better address pedestrian impacts during construction. Attached are the recommended changes and a *Guide for Temporary Pedestrian Accommodations*. The *Guide* includes the following:

- Flowchart to determine accommodation of pedestrians in work zones
- Description of how the consideration of pedestrian needs will be integrated into the project development process
- Pedestrian Task Force Considerations

These documents are to be distributed to all applicable personnel within your area and changes should be implemented immediately on all highway projects.

MAILING ADDRESS:
NCDOT DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
1355 MAIL SERVICE CENTER
RALEIGH, NC 27604-7000

TELEPHONE: 919-733-7384
FAX: 919-733-7428
WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1300 W. WILKINSON STREET
RALEIGH, NC

Steve Varnedoe, PE & Debbie Barbour, PE
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Also, to facilitate the implementation of these changes, a Pedestrian Task Force has been formed to:

- Act as consultant for the Planning staff using the "Guide to Determine Accommodation of Pedestrians in Work Zones",
- Assist Design and Operation staff in addressing any concerns pertaining to providing pedestrian accommodations during construction, and
- Address issues on projects under construction or beyond the planning phase on a project by project basis.

Stuart Bourne will lead the Pedestrian Task Force. The Task Force will consist of a representative from the Project Development and Environmental Analysis Branch, Roadway Design Unit, Construction Unit, Division of Bicycle and Pedestrians, and the Division.

Additionally, the committee is in the process of developing a plan to educate the Department on pedestrian needs during construction and the requirements of Chapter 6 of the MUTCD. The initial focus of this broader education plan will target appropriate personnel for instruction on recognizing and resolving deficiencies in pedestrian safety, accessibility, and mobility in construction work zones.

Please contact Stuart Bourne in the Work Zone Traffic Control Unit at 919-250-4159 if you have any questions.

WFR/jlp

Attachments

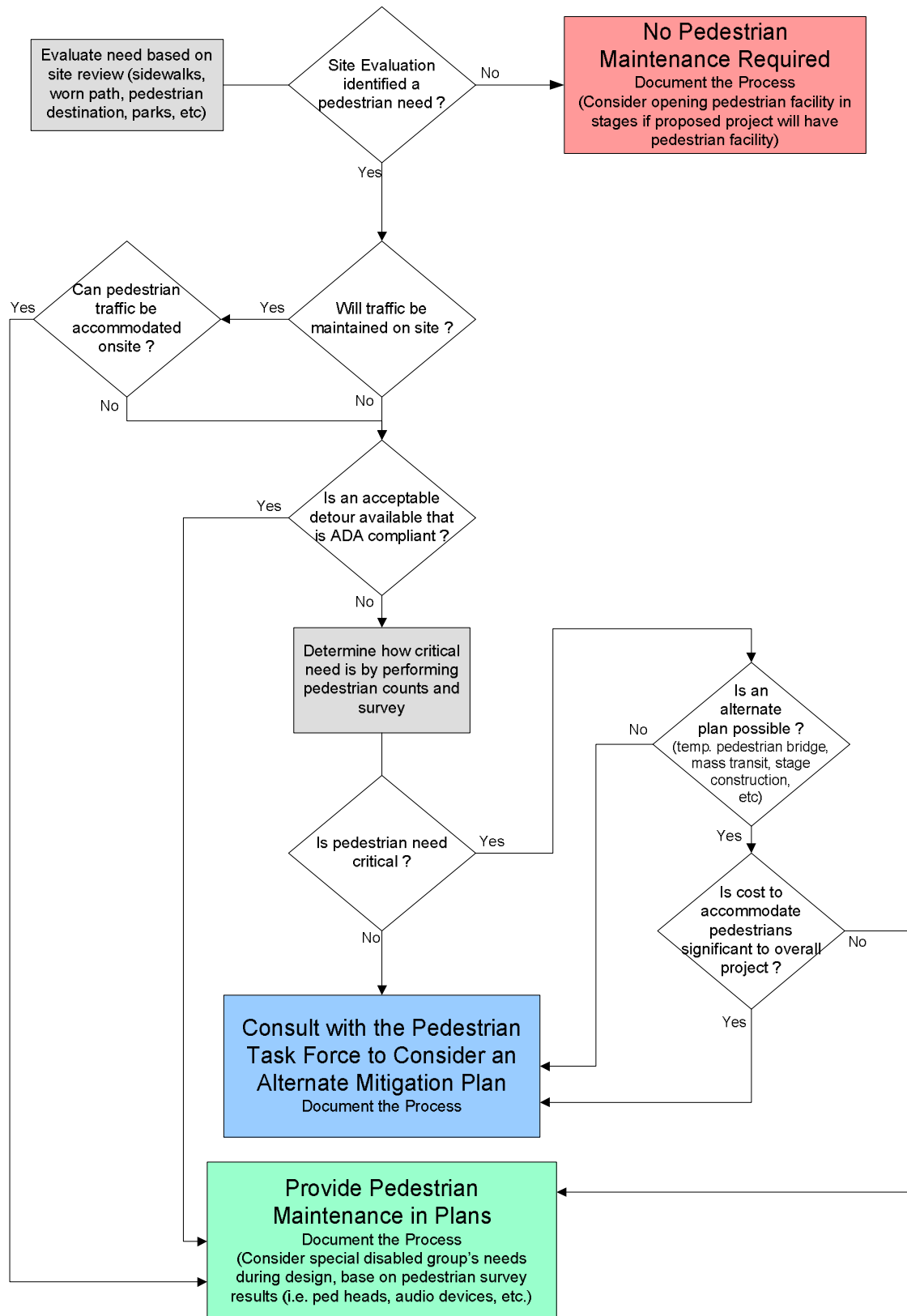
cc w/attachments: Susan Coward
Lacy Love, PE
Jon Nance, PE
Tom Norman
Stuart Bourne, PE

RECOMMENDED CHANGES TO BETTER ADDRESS TEMPORARY PEDESTRIAN IMPACTS

Updated May 2008

Action Items	Responsible Unit	Committee Contact	Status
1. Add a bullet in the Feasibility Studies Unit Scoping Procedures to Flag Pedestrian Issues	Feasibility Studies Unit	Joseph Ishak	Completed
2. Review existing procedures and develop a new procedure to address temporary pedestrian accommodations in the project development process	PDEA	Jennifer Evans	In progress
3. Review and revise Community Studies Community Characteristics Report (CCR) and Community Impact Assessment (CIA) guidance procedures and the CIA site visit checklist structure, where it is deemed to be necessary.	PDEA	Tris Ford	In progress
4. Revise Minimum Criteria Checklists	Roadside Environmental	Jennifer Evans/Charles Cox	In progress
5. Arrange training ADA/504 Training for PDEA staff	ADA Coordinator	Walt Thompson	TBD
6. Revise signal recommendation letter	Traffic Engineering Branch	Bucky Galloway	Completed
7. Add question in Combined Field Inspection, Final Design Field Inspection, and Pre-Let Field Inspection Checklist	Roadway Design Unit	Jay Bennett	Completed
8. Revise Chapter 28, Sidewalks, Pedestrian Policy Guidelines, of the Policy and Procedure Manual	Alternative Delivery Unit	Mitch Hendee	In progress
9. Pedestrian Policy Task Force will integrate work zone issues	Pedestrian Task Force	Jeff Cox	TBD
10. Review encroachment agreement to possibly include language to better address temporary pedestrian impacts	State Road Maintenance Unit	Ron Hancock Joseph Ishak	In progress July 2008

Flowchart to Determine Accommodation of Pedestrians in Work Zones



GUIDE FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS MAY 2008

INTEGRATING IMPACTS INTO THE PROJECT DEVELOPMENT PROCESS

Feasibility Study – Feasibility Studies Unit

A project may be identified for potential pedestrian issues during construction. This information will be provided to PDEA as background information at the project initiation meeting. Mostly urban projects will be identified for possible measures for accommodation of pedestrians within the work zone.

Project Initiation Meeting – Project Development and Environmental Analysis

Six to eight months prior to scoping meeting, a project initiation meeting will be held to begin collecting information about the proposed project. Among the items to be discussed, potential detour routes and temporary pedestrian impacts should be included. After the meeting the PDEA engineer should request the Community Characteristics Report as stated in the PDEA Scoping Procedures.

Community Characteristics Report – Human Environment Unit

This report is a broad look at the key characteristics of the study area. Alternatives have not been formally developed at this time. As part of the preparation of the Community Characteristics Report, the Planner should consider the potential temporary impacts to pedestrians and should include a brief discussion within the report to help identify the issue at Project Scoping. This report should be completed prior to the Project Scoping Meeting.

Project Scoping Meeting – Project Development and Environmental Analysis

Within the items to discuss at the Project Scoping Meeting, the potential of temporary impacts to pedestrians during construction should be included. This should tie in with the discussion of alternative routes/detour routes and community features.

Alternative Development – Project Development and Environmental Analysis

As alternatives are developed, the potential temporary impacts to pedestrians should be considered. The engineer should refer to the *Flowchart to Determine Accommodation of Pedestrians in Work Zone Flow* to establish the need to accommodate pedestrians in work zone. Once alternatives are established the Community Impact Assessment is requested.

Community Impact Assessment – Human Environment Unit

Planner should look closely at items such as community cohesion, demographics, mobility and access, etc. and assess the potential impacts to pedestrians during the construction stage. During the field visit, the planner should note existing facilities, perceived use of existing facilities and pedestrian generators. Pedestrian activity should be observed and noted. These items should be included as a discussion in the final report and used to aid in selection of the build alternative.

Citizen Informational Workshop – Human Environment Unit

If a Citizen Workshop is conducted, the engineer should present information on any potential impacts and try to solicit comments from the project stakeholders. The newsletter mailing could assist in solicitation of comments about temporary pedestrian impacts.

Corridor Design Public Hearing – Human Environment Unit

If temporary pedestrian impacts are identified for alternatives, these impacts should be presented at the hearing. Comments from the public should be solicited and factored into the selection of the build alternative. The newsletter mailing could assist in solicitation of comments.

GUIDE FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS MAY 2008

Selection of Build Alternative – Project Team

The temporary pedestrian impacts should be included in the discussion of alternatives and should factor into the build alternative decision. Evaluate the build alternative to determine the level of impact that accommodating pedestrians during construction will have on that decision. The Project Team should consult with the Pedestrian Task Force if needed.

Environmental Document – Project Development and Environmental Analysis

The findings from the Community Impacts Assessment, workshop and hearing concerning temporary pedestrian impacts should be discussed in the appropriate document.

Mitigating measures should also be addressed in the document. Any commitments required should be included on the project greensheet.

Design Public Hearing – Human Environment Unit

Build alternative and impacts from the alternative are presented to the public. The newsletter mailing could assist in presentation of temporary pedestrian impacts.

Plan Development – Highway Design

Commitments and accommodations discussed during planning will be incorporated into the plans.

Field Inspection – Highway Design and Division

Plans will be reviewed with the Division Construction Engineer and the field inspection checklist will include a question to ensure that pedestrian issues have been incorporated into project and that there are not any associated constructability issues.

Project Construction – Division

Implement pedestrian accommodations as per plans and the planning document.

GUIDE FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS MAY 2008

PEDESTRIAN TASK FORCE CONSIDERATIONS

When a project is submitted to the Pedestrian Task Force for review, it will be the responsibility of the Task Force to review the decision making process used by the project team before recommending a course of action. During this review, the Pedestrian Task Force will consider the following:

- Whether the existing population, travel, and attractors indicates an absence of need for accommodations
- Whether environmental or social impacts outweigh the need for accommodations
- Whether safety would be compromised
- Whether total cost of pedestrian accommodations to the appropriate system (i.e., interstate, primary, secondary, or urban system) would be excessively disproportionate to the need for the facility
- Whether purpose and scope of the specific project facilitates the provision of accommodations
- Whether pedestrian travel is allowed by state or federal laws
- Impacts to the overall project time and project completion

ROUGH DRAFT

Skaggs Method for Determining Lateral Effects of a Borrow Pit on Adjacent Wetlands

Revised 12/4/07

The Environmental Evaluation section of the Reclamation Plan Procedures requires a qualified environmental consultant (DEO for Operations projects) to perform appropriate site investigations for each proposed borrow pit location.

The environmental consultant (DEO for Operations projects) shall consider impacts to adjacent wetlands and surface waters within a 400' perimeter of the proposed site. If jurisdictional areas are identified within the proposed pit or the 400' perimeter and dewatering, wet mining, or excavating below seasonal water table or adjacent streambed elevation is planned, the Contractor shall maintain a 400' buffer between the land disturbing activity or obtain concurrence for the proposed activity from the USACE.

In order to obtain concurrence from the USACE for buffers less than 400', the environmental consultant (DEO for Operations projects) must show through hydrologic analysis that the borrow pit activity will not adversely effect the surrounding jurisdictional features. The following method has been approved by the USACE for determining the minimum buffer required between borrow pit activities and adjacent jurisdictional features.

Step 1: Determine Borrow Pit Type

- Type 1: Flow from wetland to pit
- Type 2: Flow from pit to wetland
- Type 3: Flow through pits: wetland to pit on one side, pit to wetland on other side.

*Elevations ***(describe elevations)*** must be provided to support the determination.

*Type 2 pits do not require calculations. A minimum buffer of 50' will be required ***(Skaggs' email said 50', but our specs show 25' for wetlands and 50' for streams)***.

*Calculations will be required for cases where direction of flow is uncertain.

Step 2: Determine Buffer Setbacks for Type 1 and 3 Borrow Pits

- Download the Skaggs Method computer software application from:
http://www.bae.ncsu.edu/soil_water/lateral_effect/software/release/software_lateral_effect.htm
- Input the necessary information into the application to obtain the minimum buffer setback. Soil type information can be found using Soil Survey maps or by going to the Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov/app/>. The application contains a very useful Step-By-Step Help Guide.
- Print a report showing the minimum setback buffer and attach to the Reclamation Plan.

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BORROW PIT DEWATERING BASIN

DESCRIPTION

Water discharge from borrow pit sites shall not cause surface waters to exceed 50 NTUs (nephelometric turbidity unit) in streams not designated as trout waters and 10 NTUs in streams, lakes or reservoirs designated as trout waters. For lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTUs. If the turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased.

Construct, maintain, and remove earth embankments used to reduce turbidity from dewatering borrow sites. Work includes providing porous coir fiber baffles, outlet structures, cleaning out, maintaining, removing and disposing of the borrow pit dewatering basin and all components, and reshaping the area, as well as dressing, seeding & mulching the area.

MATERIALS

Utilize suitable excavated materials, as specified in Sections 225, 230 and 240, in the construction of earth embankments for borrow pit dewatering basins, except where otherwise specified.

CONSTRUCTION

Construct borrow pit dewatering basins at locations shown on Reclamation Plans or at areas directed by Engineer.

The volume of the borrow pit dewatering basin will be based on a 2 hour retention time. Using the formula $V = 8.0203 * Q * t$ where, V is volume in cubic feet, Q is the pump rate in gallons per minute (GPM), and t is the retention time of 2 hours. The pump rate is not to exceed 1,000 GPM (60,000 GPH).

The basin shall conform to the following:

Rectangular in shape with 2:1 length to width ratio.

Maximum depth of 3 feet.

Interior and exterior slopes of basin must be no steeper than 2:1.

The straight line distance between the inlet and outlet must be divided into four (4) approximately equal-length chambers. Three (3) porous coir fiber baffles shall be installed across full width of the basin to divide the basin into four (4) chambers. No earthen or rock baffles will be used.

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The water pumped from the borrow pit shall be discharged into the basin in a non-erodible manner.

The borrow pit dewatering basin outlet shall be a vertical non-perforated riser pipe, attached with a water-tight connection, to a barrel that carries the water through the embankment to the receiving waters. The riser pipe and barrel shall have a minimum diameter of 12 inches or $D=3.5Q$ (Q in cfs), whichever is larger. The top invert of the riser must be set 0.5 feet (6 inches) below the top of the dam

MAINTENANCE AND REMOVAL

Maintain the borrow pit dewatering basin, coir fiber baffles, and remove and dispose of silt accumulations in accordance with Section 1630-3.

Remove the borrow pit dewatering basin once dewatering operations are completed. Dress, seed & mulch the area after removal of the borrow pit dewatering basin in accordance with Section 1660.

MEASUREMENT AND PAYMENT

Borrow Pit Dewatering Basin quantities will be measured and paid for in cubic yards, in place and computed by the average-end-method for the actual number of cubic yards of basin capacity. The measurements will be the internal measurements of the basin measured up to the top of the outlet structure. Materials used to construct the basin that originates from another payment item (i.e. unclassified excavation, borrow excavation) will not be deducted from the volume of that original pay item. Such price will be full compensation for the construction, maintenance, providing an outlet structure, baffles, and removal once dewatering operations are completed.

Pay Item

Borrow Pit Dewatering Basin

Pay Unit

Cubic Yard

1/25/08

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Borrow and Waste Site Reclamation Procedures for Contracted Projects

History

~~The Department of Transportation (DOT) is proud of its long-standing relationship with the Department of Environment and Natural Resources (DENR). DOT is committed to provide the highest level of environmental stewardship in the protection of our state's natural resources. DOT continues to strengthen and champion the delegated erosion and sedimentation control program from DENR's Sedimentation Control Commission.~~

~~DOT operates under its exemption from the Mining Act for borrow pits provided all materials are used "in connection with the construction, repair, and maintenance" of our road system. Therefore, all provisions for erosion and sedimentation control and stabilization with ground cover for waste/borrow sites fall under the conditions of the DOT's delegated program under the Mining Act and the Sedimentation Pollution Control Act.~~

~~Currently, DOT requires reclamation plans for all waste/borrow sites. These plans address temporary erosion control, staged seeding and mulching, fertilizer topdressing, and permanent stabilization. Final inspections are conducted on all waste/borrow sites at project completion or prior to project completion if property owners elect to resume/commence agricultural land disturbing activities on the site(s).~~

~~In some cases, Land Quality has requested DOT to remobilize to sites years after project completion to address erosion or ground cover issues. This scenario has created liability issues for DOT associated with private property access and project funding availability issues. The reclamation plan is a contractual agreement between DOT, the contractor, and the property owner. In its current format, DOT has no legal authority to access private property once the conditions of the reclamation plan have been fulfilled. Also, funds for project work orders only remain open for one year following project completion.~~

~~In an attempt to resolve these issues and comply with the Sedimentation and Pollution Control Act, and the conditional exemption under the Mining Act, DOT and DENR have agreed to the following procedures:~~

~~-DOT will revise reclamation plan procedures to make access to waste/borrow sites on private property for up to one growing season after final permanent stabilization, a condition of approval.~~

~~-DOT and DENR will conduct a joint review near the completion of the growing season to ensure sufficient permanent stabilization. If remedial action is needed, DOT will be responsible for implementing corrective measures to obtain permanent stabilization.~~

~~-DENR's inspection report will serve as documentation of the final release of liability for DOT.~~

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A Reclamation Plan shall accompany any land disturbing activity associated with the project that exceed the project limits. This includes waste and borrow sites. Waste will be considered to be all excavated materials that are not utilized in the construction of the project, including overburden from borrow sources and soil type base course sources. This shall include permanent or temporary stockpiles placed beyond the project limits.

Plan Procedure

- The Contractor will submit 10 copies of the pit reclamation plan to the Resident Engineer.
- The Resident Engineer performs a cursory review to determine if the plan is complete and includes the property owner signatures and the environmental assessment.
- The Resident Engineer must make a site visit. It is suggested that the Contractor and Property Owner be contacted and invited to attend this visit. Assure that the haul road is shown on map and note the site distance that will be provided for all vehicles at the proposed intersection.
- The Resident Engineer should assure that an adequate number of devices are specified and sized to control erosion and address drainage. If the site is commercial, the mining permit cover page, location map and site plan shall be submitted by the Contractor. Devices should be sized to comply with Best Management Practices (BMP), including sediment storage volume, surface settling, and spillway capacity.
- Assure that minimum undisturbed vegetated buffers and setbacks have been delineated on the map: eg. 50' riparian buffer for regulated basins and jurisdictional streams, 25' buffer from wetlands (additional buffer areas may be required if it is determined that the regulated wetland and/or stream will be indirectly impacted by borrow pit operations), 50' buffer from trout waters, 10' setback from property lines (local ordinances may require additional setbacks). The environmental consultant should assure that any additional buffers, such as additional buffers around watersheds or live streams not in a currently protected basin, imposed by local or statewide governing bodies, are complied with. Remember that the haul road is a part of the plan and must comply with applicable setbacks. **Waste or Borrow activities can not occur within the 100 year floodplain or within High Quality Water Zones (water classifications include WS-1, WS-2, ORW, Class SA, and Primary Nursery Waters) unless superceded by an environmental permit.**
- If isolated wetlands are located within the site, the consultant must contact the Division of Water Quality for consultation.
- If the site is for waste, the only waste allowed, without a permit from the Solid Waste Division, is for beneficial fill consisting of inert debris strictly limited to concrete (encapsulated rebar is OK), brick, concrete block, uncontaminated soil, rock and gravel. Asphalt, placed a minimum of 4 feet above the water table, is allowed but is not considered beneficial fill. If wood is present in the waste, then the rules for a Land Clearing and Inert Debris Landfill must be followed.
- The Resident Engineer should advise the property owner that a 1 year, post-final compliance review will be held. At that time, any corrective action required will be performed by the Contractor, or by DOT forces or Contractors should the Contractor of record refuse to repair the area.

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- After review by the Roadside Environmental Field Operations Engineer, the Resident Engineer will submit approved copies of the map and plan as detailed on the Reclamation Plan Check Sheet. Any revisions must be initialed by the Contractor and Property Owner prior to final approval.
- If the pit is expanded, the original environmental evaluation must have been performed over the area in which the expansion is planned and must account for the expansion and the expanded activity, or a new environmental evaluation must be submitted. It is suggested that the entire parcel be included during the initial environmental evaluation.
- The boundaries of the pit and any environmentally sensitive areas within the pit or within the area of the environmental evaluation must be physically delineated and GPS coordinates must be provided.

Environmental Evaluation

ENVIRONMENTAL EVALUATION FOR BORROW/WASTE SITE

The attached information is provided to assist you in the review of the necessary documentation to confirm that candidate borrow and/or waste sites do not impact wetlands, surface waters (streams, lakes or ponds), regulated riparian buffers or federally-protected species. The Resident Engineer and Division Environmental Officer will evaluate the environmental documentation that is required, along with the reclamation plan and associated checklist.

Approval of the use of the borrow or waste site for activities exclusively in support of a North Carolina Department of Transportation project will be, in part, dependent on the presence or absence of these sensitive environmental resources at the candidate sites.

In order to provide the necessary environmental documentation to the Resident Engineer and Environmental Officer, it will be necessary for the Contractor to engage the services of a qualified environmental consultant to perform appropriate site investigations that will confirm or refute the occurrence of wetlands, surface waters, regulated riparian buffers and federally protected species within the impact limits of the proposed waste and/or borrow sites and associated access or haul roads.

Contractor Employs Environmental Consultant.

In order to ensure that the candidate borrow and/or waste sites have been properly evaluated, the contractor may employ the services of an experienced environmental consultant. The environmental consultant must be competent in the natural sciences, with proficiency in jurisdictional wetland and stream identification and delineation, protected riparian buffer identification, and experience in conducting site investigations for the presence of federally protected species.

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Once the consultant has completed thorough field inventories of the candidate borrow and/or waste sites, a concise technical report should be submitted to the contractor, detailing any pertinent findings. The following information should be included in the report:

- General description of candidate site location including a location map, USGS Topographic Map, and a Soil Survey Map.
- General description of the vegetative communities at and adjacent to the candidate site.
- Identification, delineation, and discussion of jurisdictional wetlands at the candidate site (including a discussion of soils, vegetation, and hydrology and completion of USACE wetland data sheets).
- Identification, delineation and discussion of jurisdictional surface waters (streams, ponds or lakes) at the candidate site. If dewatering of the pit is proposed, define the point at which the discharge effluent enters into jurisdictional waters. Include GPS coordinates for upstream and downstream sampling locations.
- Identification, delineation and discussion of regulated riparian buffers at candidate sites and within 50 feet of candidate sites located within river basins that are subject to buffer rules. If a stream, pond or lake is depicted on the most recent U.S. Geologic Service topographic map (1:24,000 scale) or soil survey prepared by the U.S. Department of Agriculture-Natural Resource Conservation Service, (formerly Soil Conservation Service), the system is subject to the riparian buffer rule. The contractor may contact the N.C. Division of Water Quality for an on-site determination to identify inaccurately depicted surface waters or waters that the consultant determines may be blue-lined but are not depicted.
- Evaluation of potential habitat for federally protected species and surveys for federally protected species if habitat is identified at the candidate borrow and/or waste site. Biological conclusions shall be rendered for each species.
- **If jurisdictional areas are identified within the proposed pit or the 400' perimeter and dewatering/wet mining/ excavating below seasonal water table or adjacent streambed elevation is planned, the Contractor shall maintain a 400' buffer between the land disturbing activity or obtain concurrence for the proposed activity from the USACE. Any meeting with the USACE will include the Resident Engineer or a member of their staff.** Identification of jurisdictional wetlands, surface waters, and protected riparian buffers at the site or within a 400' perimeter of the site, on appropriate and relevant maps. These types of maps include U.S. Geologic Service topographic map (1:24,000 scale) and soil survey prepared by the U.S. Department of Agriculture-Natural Resource Conservation Service, (formerly Soil Conservation Service), and site map. All copies of the reclamation plan shall include color topographic maps. The maps should be clear enough to allow someone unfamiliar with the locale to travel to the site and identify all points of interest discussed in the report using GPS coordinates (i.e. wetlands, surface waters, regulated riparian buffers and federally protected species). Local roads should be labeled and each map must be prepared to scale. At least one figure should identify the boundaries of the candidate site, using GPS coordinates, within a larger landscape setting. Additionally, boundaries of the candidate site shall be flagged. The environmental consultant shall consider impacts to adjacent wetlands and surface waters within a 400' perimeter of the proposed site. ~~If jurisdictional areas are identified within the proposed pit or the 400' perimeter and dewatering/wet mining/ excavating below seasonal water table or adjacent streambed elevation is planned, the Contractor shall maintain a 400'~~

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~~buffer between the land disturbing activity or obtain concurrence for the proposed activity from the USACE. Any meeting with the USACE will include the Resident Engineer or a member of their staff.~~ When jurisdictional areas are found to be within 400' of the borrow pit follow the procedures outlined in Skaggs Method for Determining Lateral Effects of a Borrow Pit on Adjacent Wetlands found on REU Field Operations website (http://www.ncdot.org/doh/operations/dp_chief_eng/roadside/fieldops/downloads/) when proposing buffers less than 400'.

- If water is to be pumped from the site, and the site falls within one of these 15 counties; Beaufort, Carteret, Craven, Duplin, Edgecombe, Greene, Jones, Lenoir, Martin, Onslow, Pamlico, Pitt, Washington, Wayne, Wilson, the contractor's plan to comply with the North Carolina Division of Water Resource's Central Coastal Plain Capacity Use Area rules shall be discussed.
- If the site is within the 100 year flood plain, provide appropriate permits.
- Qualifications and experience of the investigators and the methodologies employed in the investigation.

The purpose of this report is to verify whether there are wetlands, surface waters, regulated riparian buffers, or federally protected species at the site prior to the initiation of construction activities. The contractor should attach the technical report to the draft reclamation plan at the time the report is submitted to the Resident Engineer. The Resident Engineer will forward a copy of the report to the Division Environmental Officer.

During Construction

- Assure that if buffer zones are required, they have been physically delineated and the GPS coordinates compare correctly with the physical delineation.
- Assure that approved sediment controls are adequately installed.
- Require the stockpiling of topsoil for replacement on pit slopes.
- Seed and mulch the stockpile and provide temporary sediment control if needed.
- Inspect each pit at least weekly as a part of the routine weekly erosion control inspection.
- If water is being pumped, ensure that BMP's have been designed, installed, operated, and maintained to minimize turbidity to the extent to avoid habitat degradation or removal of a use designation. Refer to Procedures for Monitoring Borrow Pit Discharge Special Provision for more details.
- Limit the erodible slope area to 1 acre prior to beginning seeding.
- Excavate sites in a manner that allows for dressing and seeding of slopes in keeping with the 1 acre tolerance.
- Assure that a minimum of 4 feet of water will remain in the pit if it is to serve as a pond.
- Occasionally check the site for plan conformance and either revise the plan or correct the site.
- Check slope rates during construction. Slopes should be built to plan rates during the initial disturbance to provide the best opportunity for permanent stability and limit the need for temporary seeding.

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Final Inspection

- Compare the final condition of the pit to the plan and amend the plan or the pit if differences exist.
- Assure that a permanent stand of vegetation is covering the pit. The type of vegetation should meet the reclamation plan seed mixture. If necessary, various types of seed should be incorporated into the seed mixture to assure a long lasting, survivable vegetative cover.
- Assure that a minimum of 4 ft. of water is remaining in the pit if it is to serve as a pond.
- Assure that a minimum of 6" of soil, capable of supporting vegetation, is covering waste.
- Ensure that no standing pools of water remain.
- Ensure that all temporary sediment controls have been removed.
- Ensure that the final contours are compatible with the surrounding topography.
- IN WRITING, notify the Property Owner that the project is complete and all work on the site is complete. This notification shall refer to the property owner's signed statement allowing site inspections and any repair work during the coming year.

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Borrow / Waste Site Reclamation Plan Maps

1. **Person preparing this plan must be Level III-B E&SC/Stormwater Certified.**
2. Submit ten (10) copies.
3. Include an inset showing a vicinity map. This vicinity map may be a copy of a county secondary road map.
4. The map will be an accurately scaled drawing, aerial photograph or enlarged topographic map showing the following:
 - a) Property lines, easements and rights of way of the tract(s) of land under consideration.
 - b) Wetlands & buffer zones.
 - c) Blue line streams & buffer zones shown either on topographic maps or soil conservation maps or as field determined by the Division of Water Quality.
 - d) Outline of the proposed pit or waste area.
 - e) Outline of stockpile areas.
 - f) Location of access roads, haul roads and ditches along with proposed sediment and turbidity (if de-watering) control measures.
 - g) Show size and type of specific erosion control measures. Indicate drainage area and disturbed area flowing to each device. Include calculations for time of concentration, sediment storage volume ($3600 \text{ ft}^3/\text{disturbed acre}$), peak flow for design storm ($Q_{10\text{peak}}$ in ft^3/s), surface area in ft^2 ($A = 435.6 * Q_{10\text{peak}}$), basin dimensions (limit depth to 3 ft. max), and stone spillway capacity ($Q = CLH^{1.5}$; limit H to 0.5 ft. max and use $C = 2.5$). Use 25 year design in High Quality Water zones.
 - h) In the event skimmer outlets or flashboard riser outlets are used, sediment storage volume ($1800 \text{ ft}^3/\text{disturbed acre}$), peak flow for design storm ($Q_{10\text{peak}}$ in ft^3/s), surface area in ft^2 ($A = 325 * Q_{10\text{peak}}$), basin dimensions (limit depth to 3 ft. max), and fabric lined spillway capacity ($Q = CLH^{1.5}$; limit H to 0.5 ft. max and use $C = 2.5$). Use 25 year design in High Quality Water zones.
 - i) Show the cross section, eg. 3:1, degree of slope for all slopes, whether fill or cut slopes. Include the cross slope and longitudinal slope of any ditch employed in the plan.
 - j) Map Legend:
 - 1) Name of Contractor
 - 2) **Plans prepared by**
 - 3) **Level III-B E&SC/Stormwater Certification Number**
 - 4) Name of Property Owner(s)
 - 5) North Arrow
 - 6) County
 - 7) Project Number or WBS Element
 - 8) Contract Number
 - 9) TIP Number
 - 10) Scale
 - 11) Date Prepared

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Reclamation Plan Checklist for Contracted Projects

Date Received: _____

Borrow Pit ()

Waste Site ()

Contract Number: _____ TIP Number: _____

Project #/WBS

Element: _____

Property Owner: _____

Address: _____

Pit Address: _____

(if different) _____

Description: _____

	YES	NO	N/A
1. For Division Operation Projects, has a Minimum Criteria Determination Checklist been performed and copy attached?			
2. Is the source commercial?			
3. If commercial, has:			
a. Mining permit number been provided?			
b. Copy of Mining Permit cover page submitted?			
c. Copy of site plan submitted?			
Commercial Permit Number: _____			
4. If there is no permit number has the DENR Regional Engineer been notified?			
5. Has the Reclamation Plan been submitted			
Narrative			
Map			

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6. Are all required signatures on narrative and map?			
7. Does map include vicinity map?			
8. Has site inspection been made? (Property owner invited?)			
9. Are all questions satisfactorily answered on narrative?			
	YES	NO	N/A
10. Has the mandatory letter from the SHPO been attached & any required conditions complied with?			
11. If this is a waste site, has the type of debris and the amount of cover been addressed?			
12. Are Map Items Included?			
Name of designer and Level III-B E&SC/Stormwater Cert # included			
Name of Contractor			
Name of Property Owner			
North Arrow			
County			
Project No.			
Scale			
Date Prepared			
13. Has the Environmental Evaluation been submitted?			
Are wetlands present?			
Have blue line streams been delineated?			
Are buffer rules applicable?			
If yes, has diffuse flow been provided?			
Has a physical method of delineating buffers been described?			
Are applicable setbacks shown?			
Is site within 100 year floodplain?			
If yes, have appropriate permits been obtained?			
Has the DEO reviewed the assessment?			
Has the Roadside Environmental Field Operations Engineer reviewed the plan?			
14. Are slope rates indicated?			
≥ 3:1 for Coastal Plain Borrow			
≥ 2:1 for Statewide Criteria			

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15. Will water remain in the pit?			
Is the current water table elevation indicated?			
Is the proposed depth of water in the pond indicated?			
16. Will the excavation require temporary de-watering?			
Impacts to adjacent wetlands?			
Will excavation extend below the water table?			
If so and a buffer less than 400' has been proposed, has the Skaggs Method report been attached?			
Method for controlling and reducing turbidity to levels acceptable to DWQ prior to discharge indicated?			
If within 15 county CCPCUA region is the responsible person listed?			
If within CCPCUA region are wells identified with GPS?			
If within CCPCUA region and pumping is required, are pump discharge coordinates indicated?			
17. Are haul roads shown in the plan?			
18. Are construction entrances shown and detailed on the plan?			
Is sight distance adequate where trucks will enter an existing roadway?			
19. Have temporary devices been checked for location and size? (size, surface area, spillway capacity)			
	YES	NO	N/A
Has the method of maintenance for devices been described?			
Is the cross slope rate of temporary ditches, including de-watering excavation, indicated?(typ. \geq 2:1)			
20. Is staged seeding, per acre of exposed erodible slope, provided for?			
Is the seed mixture indicated and is it acceptable? Will the indicated mixture provide long term vegetative cover?			
21. Is maintenance of the site by the property owner or contractor, after final acceptance, accounted for?			
22. Have submittals been signed?			
23. Have approval letters and approved plans been sent and			

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distributed?			
Contractor – w/2copies			
Resident Engineer – w/2copies			
Project Inspector – w/1 copy			
Division Engineer – w/1copy			
DENR Regional Engineer – w/1copy			
Army Corps of Engineer – w/1copy			
Roadside Environmental Field Ops. Engineer – w/1copy			
Roadway Construction Engineer – w/1copy			
Property Owner – w/1copy			

Comments:

Signature)

(Reviewed by:

(Date/Time)

Reclamation Plan for Contracted Projects

Borrow Pit

Date: _____

Contract Number:

TIP

No: _____

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Project #/ WBS Element: _____

County: _____

Contractor: _____

Responsible

r:

Person: _____

Contractor Address: _____

Property Owner: _____

Phone Number: _____

Property Owner Address: _____

Property Address: _____

Total acreage of proposed pit: _____

Expected depth of excavation: _____

Present use of land: _____

Proposed use after reclamation: _____

Proposed sequence of excavation (include amount of clearing & proposed slope rates):

Did the Environmental Evaluation indicate the presence of any wetlands or endangered species?(if yes, briefly list findings and indicate physical means by which buffer zone will be delineated):

Is any portion of the pit or access & haul roads within a watershed with riparian buffer zone requirements? (if yes, indicate physical means by which buffer will be delineated and how diffuse flow into the buffer zone will be maintained):

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Is the site adjacent to High Quality Waters as defined by the Department of Environment and Natural Resources? (if yes, note how the devices have been designed to meet DENR requirements):

Is ~~the mandatory~~ letter from the State Historic Preservation Office attached ~~to this document? & conditions complied with?: (check one)~~ _____

~~YES ()~~ ~~NO ()~~

Describe the intended plan for the reclamation and subsequent use of all affected lands, and indicate the general methods to be used in reclaiming this land, including any stockpile areas, haul roads and ditches. Describe the sequence for reclaiming the pit. Attach a map which illustrates this plan, showing the location and design of all temporary and permanent erosion control devices. All features must comply with the appropriate specifications, standards and reflect Best Management Practices (BMP). The plan must indicate setbacks to adjacent properties, buffer zones and if de-watering is required and the pit is located within the 15 county region of the CCPCUA, the GPS coordinate location of any well located within 1500 ft. of the pit.

Will excavation extend below the water table? (If yes, see a, b, & c, below): _____

a) Specify how de-watering will be accomplished. Include proposed method of reducing effluent turbidity so that it meets the requirements of the Division of Water Quality. Show any settlement basins, construction details, and calculations on the plan:

b) If the pit is within the Central Coastal Plain Capacity Use Area, list the person responsible for completing The Division of Water Resources CCPCUA spread sheet and method of submission to the Resident Engineer:

c) If water is to remain in the pit after completion, state the estimated depth of the water.(minimum depth = 4'). Indicate the water table depth prior to beginning excavation and the method used to obtain this information:

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Describe the proposed schedule of permanent seeding and mulching. Detail the frequency of permanent seeding and mulching. Note that a permanent stand of vegetation is required prior to a final inspection:

Property Owner's Statement:

I hereby certify that I am in agreement with this development, use, and reclamation plan, and any exceptions noted when approved by the Engineer, and that I understand that I will be responsible for the site upon completion of its use in the construction of the project noted in the map legend. I understand that this plan, when approved, will serve as a guide in controlling erosion and sediment in accordance with the Mining Act and the Sediment and Pollution Control Act and as enforced by the North Carolina Department of Environment and Natural Resources (DENR). I understand that any work exceeding the minimum necessary for compliance with DENR requirements, should be negotiated between the Contractor and the Property Owner. My signature below authorizes The Department of Transportation (DOT), the Department of Environment and Natural Resources (DENR) or its agents, to enter upon my property for a period of one year from the date of final acceptance of the project for which this site plan is executed. If necessary, the DOT will be allowed to have the Contractor repair any areas that are not in compliance with DENR requirements. After a one year inspection is held, I will be solely responsible for assuring that the site is in compliance with DENR regulations. I have the right to change the condition of the site after the final inspection and prior to the one year follow-up inspection. However, if I make such changes, I acknowledge that DOT is released from all obligations and conditions of this agreement and I will become solely responsible for the condition of the site beginning on the date that I change the final inspection condition.

Signatures:

Contractor's Representative: _____

(authorized to sign supplemental agreements/date)

Owners of record:

Witness

Owner

(signature/date)

(signature/date)

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(signature/date)

(signature/date)

(signature/date)

(signature/date)

Resident Engineer: _____
(signature /date)

Exceptions: _____

Concurrence with exceptions:

Property Owner: _____ Contractor: _____
(signature/date) (signature/date)

Attachments: Site map with details
Environmental Evaluation

Cc:

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**Reclamation Plan for Contracted Projects
Waste Site**

Date: _____

Contract Number: _____ TIP No: _____

Project No/WBS Element: _____ County: _____

Contractor: _____ Responsible Person: _____

Contractor Address: _____

Property Owner: _____ Phone Number: _____

Property Owner Address: _____

Property Address: _____

Total acreage of proposed site: _____

Expected depth of waste: _____

Present use of land: _____

Proposed use after reclamation: _____

Expected type of waste that will be placed in the site (examples: asphalt, concrete, soil, stone):

Proposed sequence of placing waste (include proposed slope rates):

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Did the Environmental Evaluation indicate the presence of any wetlands or endangered species?(if yes, briefly list findings and physical means by which area will be delineated):

Is any portion of the pit within a watershed with riparian buffer zone regulations? (if yes indicate physical means by which buffer will be delineated and how diffuse flow will be maintained):

Is the site adjacent to High Quality Waters as defined by the Department of Environment and Natural Resources? (if yes, note how the devices have been designed to meet DENR requirements):

Is ~~the mandatory~~ letter from the State Historic Preservation Office attached ~~to this document? & conditions complied with? (check one)~~ —————

~~YES () NO ()~~

Describe the intended plan for the reclamation and subsequent use of all affected lands, and indicate the general methods to be used in reclaiming this land, including any stockpile areas, haul roads and ditches. Describe the sequence for reclaiming the site. Attach a map illustrating this plan, showing the location and design of all temporary and permanent erosion control devices. All features must comply with the appropriate specifications, standards and reflect Best Management Practices (BMP). The plan must indicate setbacks to adjacent properties, buffer zones and wetlands.

Describe the proposed schedule of permanent seeding and mulching. Detail the frequency of permanent seeding and mulching. Note that a permanent stand of vegetation is required prior to a final inspection:

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Property Owner's Statement:

I hereby certify that I am in agreement with this development, use, and reclamation plan, and any exceptions noted when approved by the Engineer, and that I understand that I will be responsible for the site upon completion of its use in the construction of the project noted in the map legend. I understand that this plan, when approved, will serve as a guide in controlling erosion and sediment in accordance with the Mining Act and the Sediment and Pollution Control Act and as enforced by the North Carolina Department of Environment and Natural Resources (DENR). I understand that any work exceeding the minimum necessary for compliance with DENR requirements, should be negotiated between the Contractor and the Property Owner. My signature below authorizes The Department of Transportation (DOT), the Department of Environment and Natural Resources (DENR) or its agents, to enter upon my property for a period of one year from the date of final acceptance of the project for which this site plan is executed. If necessary, the DOT will be allowed to have the Contractor repair any areas that are not in compliance with DENR requirements. After a one year inspection is held, I will be solely responsible for assuring that the site is in compliance with DENR regulations. I have the right to change the condition of the site after the final inspection and prior to the one year follow-up inspection. However, if I make such changes, I acknowledge that DOT is released from all obligations and conditions of this agreement and I will become solely responsible for the condition of the site beginning on the date that I change the final inspection condition.

Signatures:

Contractor's Representative: _____

(authorized to sign supplemental agreements / date)

Owners of record:

Witness

Owner

(signature/date)

(signature/date)

(signature/date)

(signature/date)

(signature/date)

(signature/date)

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Resident Engineer:

(signature /date)

Exceptions:

Concurrence with exceptions:

Property Owner:

(signature/date)

Contractor:

(signature/date)

Attachments: Site map with details

Environmental Evaluation

Cc:

Staging Areas

Amendment to Reclamation Plan Procedures

Staging areas are defined as temporary areas, beyond the project limits, utilized by the Contractor during the pursuit of a contract, for any activity related to the project.

In order to comply with Section 107-1 of the NCDOT Standard Specifications, the Contractor shall provide documentation ensuring the staging areas do not impact jurisdictional features such as, but not limited to, buffer zones, wetlands, streams, and threatened or endangered species habitats.

Staging areas that do not contain erodible material will require an environmental evaluation as described in the Environmental Evaluation section of these procedures. Buffer areas and wetlands found within the staging area boundary shall be delineated using highly visible fencing.

Staging areas that contain erodible material will require a full Reclamation Plan submitted to the Engineer as outlined in these procedures.

SUBMISSION OF BIDS - ALTERNATES:

(7-15-08)

SP1 G91

The *2006 Standard Specifications* are revised as follows:

Page 1-19, Subarticle 102-8(B)(2) is revised to delete the word “not”.

Page 1-27, Subarticle 103-2(B)(4) Electronic Bids, delete and replace with the following:

Do not enter zero (0) in any unit price field unless zero is the intended bid for that item. Zero will be considered a valid bid. However, where zeros are entered for items that are authorized alternates to those items for which a non-zero bid price has been submitted, zeros will be deemed invalid.

Page 1-27, Subarticle 103-2(B)(5) Electronic Bids, delete and replace with the following:

(5) When the proposal allows alternate bids, the bidder shall submit a unit or lump sum price for every item in the proposal other than items that are authorized alternates to those items for which a bid price has been submitted. Where the bidder submits a unit price other than zero for all items of an authorized alternate, the Department will determine the lowest total price based on the alternates(s) bid.

**INTERMEDIATE CONTRACT TIME NUMBER Minutes for June 19, 2008 AGC
Roadway Subcommittee Meeting**

INCENTIVE PAYMENT AND LIQUIDATED DAMAGES (RR FLAGGERS):

(8-19-08)(Draft 6-9-08)

SPI 1-1A

The Contractor shall complete all work included in this contract which requires a railroad flagger within an aggregate total of _____ days of flagger use.

The day of availability for this intermediate contract time will be the first day on which a railroad flagger is used.

The work requiring a railroad flagger is hereinafter referred to as "intermediate contract work".

It is mutually agreed that time is of the essence in completing all of this "intermediate contract work". It is further mutually agreed a delay in completing this work will result in damage due to increased engineering and flagger costs to the Department of Transportation.

By reason of the necessity of completing this "intermediate contract work", it is mutually agreed the Contractor will receive an incentive payment of \$ (Dollars) _____ per flagger day fewer than an aggregate total of ____ flagger days that this "intermediate contract work" is completed. Incentive payment will be limited to a maximum of \$ (Dollars) _____. Incentive payment determined to be due the Contractor will be paid by the Department within forty-five (45) calendar days after completion of all of this "intermediate contract work". No incentive payment will be allowed if the contract is terminated under the provisions of Article 108-13.

Liquidated damages of \$ (Dollars) _____ per flagger day will be assessed the Contractor for each flagger day the "intermediate contract work" exceeds an aggregate total of _____ flagger days.

The Engineer will withhold the liquidated damages as they accrue from the amount of monies due on work performed in the contract.

Upon apparent satisfactory completion of this "intermediate contract work", a final inspection will be held on this "intermediate contract work" in accordance with Article 105-17 of the *Standard Specifications* and upon acceptance, the State will assume responsibility for the costs of other railroad flagging.

Flagger days will be granted for authorized time extensions in accordance with the provisions of 108-10 of the *Standard Specifications*.